

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/535,279
Date Submitted: October 14, 2008		Filing Date	11/18/2003
(use as many sheets as necessary)		First Named Inventor	Pulickel AJAYAN
		Art Unit	4181
		Examiner Name	Carlos Barcena
		Attorney Docket Number	047182-0140
Sheet	1 of 5		



U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
/C.B./	B1	6,426,134 B1	07/30/2002	Lavin et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code* Number* Kind Code ² (if known)				
/C.B./	B2	DE 100 38 125 A1	03/07/2002	Infineon Technologies AG		A
/C.B./	B3	EP 0 949 199 B1	05/21/2003	Horcom Limited et al.		
/C.B./	B4	WO 01/92381 A1	12/06/2001	William Marsh Rice University		
/C.B./	B5	WO 02/060812 A2	08/08/2002	William Marsh Rice University		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
/C.B./	B6	Alexandridou et al., "Surface characterization of oil-containing polyterephthalamide microcapsules prepared by Interfacial polymerization," J. Microencapsul., 2001, 18, 767-781.	
/C.B./	B7	Armelin et al., "Study on the Degradability of Poly(ester amide)s Related to Nylons and Polyesters 6,10 or 12,10," Macromol. Chem. Phys., 2002, 203, 48-58.	
/C.B./	B8	Beaman, Ralph G., "Anionic Chain Polymerization," J. Am. Chem. Soc., Sept. 1948, 70, 3115-3118.	
/C.B./	B9	Berti et al., "Sulfur containing polymers. Aromatic polydithiocarbonates and polythiocarbonates: synthesis and thermal properties," Eur. Polym. J., 2002, 38, 1281-1288.	
/C.B./	B10	Boul et al., "Reversible sidewall functionalization of buckytubes," Chem. Phys. Lett., September 3, 1999, 310, 367-372.	
/C.B./	B11	Burroughes et al., "Light-emitting diodes based on conjugated polymers," Nature, Oct. 11, 1990, 347, 539-541.	

Examiner Signature	/Carlos Barcena/	Date Considered	11/20/2008
--------------------	------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /C.B./

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/535,279
Date Submitted: October 14, 2008		Filing Date	11/18/2003
(use as many sheets as necessary)		First Named Inventor	Pulickel AJAYAN
		Art Unit	4181
		Examiner Name	Carlos Barcena
Sheet	2 of 5	Attorney Docket Number	047182-0140

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
/C.B./	B12	Chen et al., "Dissolution of Full-Length Single-Walled Carbon Nanotubes," J. J. Phys. Chem. B, 2001, 105, 2525-2528.	
	B13	Chen et al., "Solution Properties of Single-Walled Carbon Nanotubes," Science, October 2, 1998, 282, 95-98.	
	B14	Chern et al., "Interfacial Polyfunctional Condensation : Curing Reaction," J. Appl. Polym. Sci., 1991, 42, 2535-2541.	
	B15	Chern et al., "Behavior of Interfacial Polycondensation on Synthesizing of Poly(amic ester)s," J. Appl. Polym. Sci., 1996, 61, 1853-1863.	
	B16	Chern et al., "Interfacial polyfunctional condensation: ATR study on polyfunctional interfacial condensation," J. Macromol. Sci. Chem., 1991, A28, 105-128.	
	B17	Curran et al., Handbook of Organic Molecules and Polymers: Vol. 2, Conductive Polymers: Synthesis and Electrical Properties, 1997, pp. 1-59.	
	B18	Ederle et al., "Carbanions on Grafted C ₆₀ as Initiators for Anionic Polymerization," Macromolecules, 1997, 30, 4262-4267.	
	B19	Franco et al., "Incorporation of glycine residues in even-even polyamides. Part II: Nylons 6,10 and 12,10," Polymer, 1999, 40, 2429-2438.	
	B20	Garg et al., "Effect of chemical functionalization on the mechanical properties of carbon nanotubes," Chem. Phys. Lett., 1998, 295, 273-278.	
	B21	Gonsalves et al., "Synthesis, Characterization and Biodegradation Test of Nylon 2/6 and Nylon 2/6/6," J. Mater. Chem., 1991, 1(4), 643-647.	
	B22	Gonsalves et al., "Copolymers of Nylon 266 and Nylon 66 : Synthesis and Characterization," J. Polym. Sci. Pol. Chem., 1993, 31, 701-705.	
	B23	Greenham et al., "Efficient light-emitting diodes based on polymers with high electron efficiencies," Nature, October 14, 1993, 365, 628-630.	
/C.B./	B24	Guemmour et al., "Synthesis and thermal properties of new polyester based on indane-1,3-diol and terephthaloyl chloride," Polym. Bull, 2001, 46, 1-6.	

Examiner Signature	/Carlos Barcena/	Date Considered	11/20/2008
---------------------------	------------------	------------------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE. /C.B./

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/535,279
Date Submitted: October 14, 2008		Filing Date	11/18/2003
<i>(use as many sheets as necessary)</i>		First Named Inventor	Pulickel AJAYAN
		Art Unit	4181
		Examiner Name	Carlos Barcana
		Attorney Docket Number	047182-0140
Sheet	3 of 5		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
/C.B./	B25	Hill et al., "Functionalization of Carbon Nanotubes with Polystyrene," <i>Macromolecules</i> , 2002, 35, 9466-9471.	
	B26	Hirsch, Andreas, "Functionalization of Single-Walled Carbon Nanotubes," <i>Angew. Chem., Int. Ed.</i> , 2002, 41(11), 1853-1859.	
	B27	Holzinger et al., "Sidewall Functionalization of Carbon Nanotubes," <i>Angew. Chem., Int. Ed.</i> , 2001, 40(21), 4002-4005.	
	B28	Iijima, Sumio, "Helical microtubules of graphitic carbon," <i>Nature</i> , November 7, 1991, 354, 56-58.	
	B29	Jegal et al., "Functional Polyesters and Copolyesters Based on the 4,4'-Dihydroxy- α -methylstilbene," <i>J. Appl. Polym. Sci.</i> , 1998, 68, 387-393.	
	B30	Jiang et al., "Synthesis, Structure, and Ring-Opening Polymerization of Macrocyclic Aromat Esters: A New Route to High-Performance Polyarylates," <i>Macromolecules</i> , 1997, 30, 2839-2842.	
	B31	Kallitsis et al., "Soluble Polymers with Laterally Attached Oligophenyl Units for Potential Use as Blue Luminescent Materials," <i>Macromolecules</i> , 1997, 30, 2989-2996.	
	B32	Kroto et al., "C ₆₀ : Buckminsterfullerene," <i>Nature</i> , November 14, 1985, 318, 162-163.	
	B33	Lei et al., "A new interfacial polymerization method for forming metal/conductive polymer Schottky barriers," <i>Synth. Met.</i> , 1992, 47, 351-359.	
	B34	Li et al., "Synthesis and Characterization of Interfacially Polymerized Films of Tetraphenylporphyrin Derivatives," <i>Langmuir</i> , 1995, 11, 4061-4071.	
	B35	Liu et al., "Fullerene Pipes," <i>Science</i> , May 22, 1998, 280, 1253-1256.	
✓	B36	Mickelson et al., "Fluorination of single-wall carbon nanotubes," <i>Chem. Phys. Lett.</i> , October 30, 1998, 296, 188-194.	
/C.B./	B37	Min et al., "Synthesis and Characterization of Some Polyestercarbonates," <i>Polym. J.</i> , 2001, 33(9), 694-700.	

Examiner Signature	/Carlos Barcana/	Date Considered	11/20/2008
---------------------------	------------------	------------------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST 3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /C.B./

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/535,279
		Filing Date	11/18/2003
Date Submitted: October 14, 2008 (use as many sheets as necessary)		First Named Inventor	Pulickel AJAYAN
		Art Unit	4181
Sheet 4 of 5		Examiner Name	Carlos Barcena
		Attorney Docket Number	047182-0140

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
/C.B./	B38	Morgan et al., "Interfacial Polycondensation. II. Fundamentals of Polymer Formation at Liquid Interfaces," J. Polym. Sci., 1959, 40, 299-327.	
	B39	Nikolaev et al., "Gas-phase catalytic growth of single-walled carbon nanotubes from carbon monoxide," Chem. Phys. Lett., November 5, 1999, 313, 91-97.	
	B40	Percec, Virgil, "Comments on 'Interfacial Polycondensation. I.', by Emerson L. Wittbecker and Paul W. Morgan, J. Polym. Sci., XL, 289(1959) and 'Interfacial Polycondensation. II. Fundamentals of Polymer Formation at Liquid Interfaces,' by Paul W. Morgan and Stephanie L. Kwolek, J. Polym. Sci., XL, 200(1950)," J. Polym. Sci.: Part A : Polymer Chemistry, 1996, 34, 519-520.	
	B41	Rutot et al., "Aliphatic polyester-based biodegradable materials : new amphiphilic graft copolymers," Polym. Degrad. Stabil., 2001, 73, 561-566.	
	B42	Salehi-Mobarakeh et al., "Ionic Interphase of Glass Fiber/Polyamide 6,6 Composites," Polym. Compos., 1998, 19(3), 264-274.	
	B43	Sano et al., "Self-Organization of PEO-graft-Single-Walled Carbon Nanotubes in Solutions and Langmuir-Blodgett Films," Langmuir, 2001, 17(17), 5125-5128.	
	B44	Shaffer et al., "Polystyrene grafted multi-walled carbon nanotubes," Chem. Commun., 2002, 18, 2074-2075.	
	B45	Shao et al., "Electrical Conductivity in Nylon 66 Thin Films Prepared by Alternating Vapor Deposition Polymerization," Polym. J., 1999, 31(11-2), 1083-1088.	
	B46	Shimoyama et al., "Fabrication of quantum wire structures by in-situ gas etching and selective-area metalorganic vapor phase epitaxy regrowth," J. Crystal Growth, 1994, 145, 734-739.	
	B47	Shin et al., "Synthesis and Properties of Poly(enaryloxynitriles) Containing Flexible Polyester Units," Macromolecules, 1995, 28, 2212-2217.	
✓	B48	Tang et al., "Organic electroluminescent diodes," Applied Phys. Lett., September 21, 1987, 51(12), 913-915.	
/C.B./	B49	Thompson et al., "Synthesis and characterization of aromatic-aliphatic poly(enaminonitriles)," Polymer, 2000, 41, 4991-5000.	

Examiner Signature	/Carlos Barcena/	Date Considered	11/20/2008
--------------------	------------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional) 2 See Kind Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/535,279
Date Submitted: October 14, 2008		Filing Date	11/18/2003
(use as many sheets as necessary)		First Named Inventor	Pulickel AJAYAN
		Art Unit	4181
		Examiner Name	Carlos Barcena
Sheet	5 of 5	Attorney Docket Number	047182-0140

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁶
/C.B./	B50	Treacy et al., "Exceptionally high Young's modulus observed for individual carbon nanotubes," Nature, June 20, 1996, 381, 678-680.	
/C.B./	B51	Varelidis et al., "Characterization of Coatings of Poly(hexamethylene adipamide) Deposited on Carbon Fibers by Interfacial Polymerization Techniques," J. Appl. Polym. Sci., 1995, 55, 1101-1110.	
/C.B./	B52	Vibhute et al., "Synthesis and Characterization of New Cardo Polyesters," J. Polym. Sci. Pol. Chem., 1997, 35, 3227-3234.	
/C.B./	B53	Wei et al., "Thermal Expansion and Diffusion Coefficients of Carbon Nanotube-Polymer Composites," Nano Lett., 2002, 2(6), 647-650.	
/C.B./	B54	Williams et al., "Interfacial Polymerization for the Preparation of Regularly Alternating Polyesteramides," Makromolekulare Chemie, 1963, 54, 54-59.	
/C.B./	B55	Yakobson et al., "Nanomechanics of Carbon Tubes: Instabilities beyond Linear Response," J. Phys. Rev. Lett., April 1, 1996, 76(14), 2511-2514.	
/C.B./	B56	Yoo et al., "Preparation of Dicyanovinyl-Containing Polyarylates and Their Thermal Properties," Polymer(Korea), 1996, 20(3), 439-446.	

Examiner Signature	/Carlos Barcena/	Date Considered	11/20/2008
---------------------------	------------------	------------------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /C.B./